

In re Application of Hideaki Takahashi

App. No.: 10/709243
Filed: April 23, 2004
Conf. No.: 3242
Title: ARMATURE OF ROTARY
ELECTRICAL APPARATUS
Examiner: Y. Comas
Art Unit: 2834
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

APPELLANT'S BRIEF

REAL PARTY IN INTEREST

In addition to the appellant, the real party in interest is his assignee, Kabushiki Kaisha Moric, a Japanese company.

RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences that would have a bearing on or be affected by the decision in this appeal.

STATUS OF CLAIMS

Claims 1 through 14 remain in this application and all are before the Board on appeal.

STATUS OF AMENDMENTS

This rejection appealed in this case has not been made final. However there was a Final Rejection, made June 19, 2006. Appellant filed a Request For Reconsideration in response to the Final Rejection and the Examiner then reopened prosecution and made a new, non-final rejection that made of essence the same rejection as that of the earlier final rejection and cited no additional art. Thus it is believed that prosecution can be shortened by again appealing the case.

SUMMARY OF CLAIMED SUBJECT MATTER

Appellant's invention as claimed in claim 1, the only independent claim before the Board recites a relatively simple, highly effective and low cost armature for a rotating electrical machine, such as either an electric motor or a generator. This armature construction is first described in Paragraph [0034] and is identified in the drawings by the reference numeral 31. The claim continues to call for a core indicated by the reference numeral 32 that is comprised of laminated plates forming pole teeth that extend radially from a ring shaped portion. The teeth are indicated by the reference numerals 38 and the ring shaped portion is indicated by the reference numeral 37. This structure is first described in Paragraph [0035] and appears best in FIG. 1.

As also described first in this paragraph, this core is encircled and covered by axially extending insulator halves 35. These halves 35 enclose the core 37.

A wiring base, identified by the reference numeral 33, is fixed to one axial side of the armature for receiving the ends of the coil wires that encircle the pole teeth 38. This is first described in Paragraph [0034] and in more detail later in a manner shown in FIGS. 2-6 and described in Paragraphs [0037] through [0050]. The manner of attachment also provides an accurate and positive orientation of the wiring base to the armature.

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

There are two grounds of rejection before the Board. The first is whether the subject matter of claims 1-5 and 8-12 are anticipated under 35 USC 103(a) by the combination of US Patent 6,856,055 (Michaels et al) and US Patent 4,386,288 (Laurie). Inherent in determining the answer to this question is why would one skilled in the art make this combination?

The remaining question is whether the subject matter of claims 6,7, 13 and 14 are anticipated under 35 USC 103(a) by the combination of US Patent 6,856,055 (Michaels et al) and US Patent 4,386,288 (Laurie) stated above in further view of British 2,333,647 (Carli).

APPELLANT'S ARGUMENTS

Claim 1 is not Anticipated

The Examiner makes several errors in his allegations regarding the construction of the basic Michaels reference. He first states that it has "a core consisting of a plurality of laminated plates having a circular member from which a plurality of pole teeth radially extend". The Board is solicited to compare this misstatement with the showing in FIG. 1A of the reference. The reference correctly describes this figure as showing "a partial cross-sectional view showing a segmented stator. Each

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segment has one pole tooth that the reference has “an outer section and a tooth shaped pole section” See Column 3 lines 34 and 35. Nowhere in the description of this reference is the word “laminated” found. Thus the examiner’s basic interpretation of the disclosure of Michaels on which his rejection is based is wrong.

In addition the claim rejected calls for “a pair of insulators positioned on opposite axial sides of said core” which the Examiner alleges is disclosed in this reference, but is not. Thus this reference fails to show the basic construction again specifically claimed.

Finally the Examiner incorrectly states that this reference discloses a “wiring base”, this being the element 100. The reference characterizes the element 100 as “an interconnecting ring and wire guide”. Although it may guide the wires, this is not what is claimed. The claim calls for the wiring base to retain “the wire ends of the coil windings”. This is more than really guiding an area spaced from the wire ends. It should be noted that appellant desires to circumferentially, radially and axially locate the winding ends.

Since the Examiner’s interpretation of the basic construction is incorrect in so many ways, none of which are cured by the secondary reference, which the Examiner cites to cure only the lack of an insulator, even though he has alleged that the basic reference has one.

As an additional point of distinction the Michaels reference, although it may provide circumferential positioning, it is not at all clear that it provides positioning in the other two directions called out in the appealed claims.

Laurie remedies none of the aforementioned deficiencies in the Examiner’s basic reference.

Claims 2-4 and 8-11 stand or fall with claim 1.

Claim 5 is not anticipated

Claim 5 depends on claim 2 and adds to it a further recitation as to the manner of assembly that prevents disassembly. This is the use of the hook like projection best seen in FIG. 3. There is no such structure in either cited reference and the Examiner has again failed to make out a prima facie case of obviousness.

Claim 12 stands or falls with Claim 5.


Claims 6, 7, 13 and 14 are not anticipated

These claims depend respectively on Claims 5 and 12 and specifically call for the axial prevention to be done by a hook and receiver. The cited British patent shows such a connection and it is not argued that this type of connection is novel. However this piling on of references is not believed to present a case of obviousness. Rather it shows that the Examiner fails to perceive anything patentable in the claimed combination, even though no basic reference shows all of the novel features as discussed above.

CONCLUSION

For the reasons stated above, a reversal of each and every ground of rejection expressed by the Examiner is solicited.

Respectfully submitted:


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APPENDIX
CLEAN COPY OF CLAIMS ON APPEAL

1. An armature construction for a rotating electrical machine comprised of a core consisting of a plurality of laminated plates having a circular member from which a plurality of pole teeth radially extend, a pair of insulators positioned on opposite axial sides of said core and having cooperating tooth engaging portions encircling said pole teeth and receiving coil windings there around, a wiring base positioned on one axial side of one of said insulators, said wiring base being made from an insulating material and receiving and retaining the wire ends of the coil windings, and interconnecting members formed on said one insulator and said wiring base for connecting said wiring base in a predetermined axial, radial and circumferential position.

2. An armature construction as set forth in claim 1 wherein the interconnecting members comprise a pair of interconnecting elements, one on each of the one insulator and the wiring base.

3. An armature construction as set forth in claim 1 wherein there are a plurality of circumferentially spaced interconnecting members.

4. An armature construction as set forth in claim 3 wherein each of the interconnecting members comprise a pair of interconnecting elements, one on each of the one insulator and the wiring base.

5. An armature construction as set forth in claim 2 wherein the interconnecting elements are engageable upon relative axial movement of the wiring base and the insulator in one direction and once engaged prevent relative movement in a direction opposite the one direction.

6. An armature construction as set forth in claim 5 wherein the interconnecting elements comprise a barbed hook and a receiver therefore.

7. An armature construction as set forth in claim 6 wherein there are a plurality of circumferentially spaced interconnecting members.

8. An armature construction as set forth in claim 1 wherein there is further provided on the wiring base and the insulator a cooperating cylindrical flange and circumferentially spaced interengaging shoulders for assisting in the radial positioning.

9. An armature construction as set forth in claim 8 wherein the interconnecting members comprise a pair of interconnecting elements, one on each of the one insulator and the wiring base.

10. An armature construction as set forth in claim 8 wherein there are a plurality of circumferentially spaced interconnecting members.

11. An armature construction as set forth in claim 10 wherein each of the interconnecting members comprise a pair of interconnecting elements, one on each of the one insulator and the wiring base.

12. An armature construction as set forth in claim 9 wherein the interconnecting elements are engageable upon relative axial movement of the wiring base and the insulator in one direction and once engaged prevent relative movement in a direction opposite the one direction.

13. An armature construction as set forth in claim 12 wherein the interconnecting elements comprise a barbed hook and a receiver therefore.

14. An armature construction as set forth in claim 13 wherein there are a plurality of circumferentially spaced interconnecting members.

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COPIES OF EVIDENCE SUBMITTED
AND RELIED UPON BY APPELLANT

None

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COPIES OF DECISIONS
IN RELATED APPEALS AND INTERFERENCES

None